

REMARKS

Form of Claim Amendments

Consistent with the telephone conversation between the undersigned and Examiner Chin on December 14, 2006, we include a complete listing of the claims above. Further, as required by 37 C.F.R. §§ 1.173(d), the markings to the claims showing changes are relative to the earlier issued patent. To comply with 37 C.F.R. § 1.173(b)(2), we have used the suggested language "once amended," "twice amended," where appropriate. As used above, and further to our telephone conversation with Examiner Chin, a previously presented new claim is indicated as "previously presented," and "once amended" if it has been subsequently amended. Claims being added by the present amendment are referred to as "new."

For the Examiner's convenience, appended to the end of this reply is a list of claims amended in the present reply, showing changes relative to the claims in the prior reply.

Claim Status

Claims 1-27, 29-33, 35-84, and 96-131 are pending. Claim 34 is withdrawn as allegedly directed to a non-elected species. Claims 85-95 have been canceled, without prejudice, as allegedly directed to a non-elected species. We reserve the right to pursue the canceled subject matter in a divisional application. Claims 107-131 are new.

The pending independent claims are claims 1, 12, 25, 37, 50, 63, 75, 96, 130, and 131.

Independent claim 12 has been amended to replace "than" with "from" at line 6, which is simply a grammatical correction, and to add the expression "and any other tooth cleaning element on the toothbrush head" to the end of the claims, to make it absolutely explicit that the claimed independent rotatability of the tooth cleaning elements is with respect to all tooth cleaning elements on the head. Support for the latter amendment is clear from the figures and the overall context of the original patent (see, e.g., col. 1, lines 26-35; col. 1, lines 55-58; col. 2, lines 34-36; and Figures 1-3.) Similarly, independent claim 25 has been amended to replace "rotatable independent of the other tuft(s) of bristles" with "rotatable independent of all other

tuft(s) of bristles on the toothbrush head.” Support for this amendment is the same as that for claim 12.

Independent claim 37 has been amended to further recite: “and wherein the socket defines a range of motion for the second tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction.” Support for this amendment can be found at, for example, col. 2, lines 28-39 and Figures 1-3. Independent claims 50, 63, 75, and 96 have similarly been amended to further recite: “wherein the socket defines a range of motion for the tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction.” Support for this amendment can be found at, for example, col. 2, lines 28-39 and Figures 1-3. Dependent claims 43, 44, 54, 69, 70, 79, and 80 have been amended to be consistent with the “range of motion” language added to the respective independent claims from which they depend.

Independent claims 63 and 96 have also been amended to delete reference to the “second aperture” and instead recite “the aperture extends from the top surface through to an intermediate surface of the head to define an opening on the intermediate surface” and that “the opening on the intermediate surface” is covered by the claimed piece. Support for these claims can be found at, for example, column 3, lines 20-34, and Figs. 2-3.

Claim 71 has also been amended to correct an error in its claim dependency.

Pursuant to 37 C.F.R. § 1.173(c), support for the new claims relative to the specification in the issued patent (US 6,553,604) is as follows:

Claims 107-111, see, for example, Figs. 1-3.

Claims 112-116, see, for example, Figs. 1-3.

Claims 117-124, see, for example, col. 2, lines 29-39 and Fig. 1.

Claims 125-129, see, for example, col. 1, lines 26-35; col. 1, lines 55-58; col. 2, lines 34-36; and Figures 1-3.

Claim 130, see, for example, col. 2, lines 28-39, col. 3, lines 23-33 and 48-50, and Figs. 1-3. This claim corresponds to previously pending claim 41 written in independent form.

Claim 131, see, for example, col. 2, lines 28-39 and Figs. 1-3.

Species Election

We elect species 1) corresponding to Figs. 2 and 3. Claims 1-27, 29-33, 35-84, and 96-131 read on the elected species. Claim 34 is withdrawn. In the event that no allowable claim is generic to the withdrawn claim, we reserve the right to pursue the subject matter of the withdrawn claims in a divisional application. Claims 85-95 have been canceled, without prejudice, as allegedly directed to a non-elected species. We reserve the right to pursue the canceled subject matter in a divisional application.

Section 112 Written Description Rejection

Claims 63-74 and 96-106 stand rejected as allegedly failing to comply with the written description requirement because of the claimed "second aperture." While we do not concede the merits of the rejection, independent claims 63 and 96 have been amended to remove reference to the "second aperture," and instead recite that "the aperture extends from the top surface through to an intermediate surface of the head to define an opening on the intermediate surface" and that "the opening on the intermediate surface" is covered by the claimed piece. This is clearly depicted in Figs. 2-3 and discussed at column 3, lines 20-34, with the claimed piece corresponding to bottom piece 24 and the claimed intermediate surface corresponding to the surface of top piece 22 adjacent bottom piece 24. Accordingly, we ask the Examiner to withdraw the rejection.

Prior Art Rejections

Independent claim 1

Independent claim 1 stands rejected as allegedly anticipated by the disclosure of Figure 2 in Japan 5-76416 ("Japan '416"). We traverse.

Figure 2 in Japan '416 does not show "each tuft of bristles being rotatable independent of the other tuft(s) of bristles," as claimed in claim 1, because each tuft of bristles in Figure 2 is paired with a second tuft of bristles on a *common* cylindrical rotation element — thus there is no

independent rotation. (See Figure 2.) The Examiner's rejection is based on an overbroad reading of the claim whereby the claimed "other tuft(s) of bristles," to which the independent rotation is compared, may refer to fewer than all of the tufts on the brush head.

While it is true that the Examiner should give each claim its "broadest reasonable construction," the claim interpretation must not be *inconsistent* with the specification." (See MPEP § 2111.01.) In the present application, JP '416 is specifically described in the background, and it is explained that the tufts in Figure 2 of JP '416 lack the claimed independent rotation:

A problem with this brush is that the two tufts of bristles are secured to strip section 5a and thus must rotate in unison. As a result, an individual tuft of bristles cannot rotate independently of its "partner" tuft. The individual tuft may then be prevented from achieving optimal penetration between two teeth during brushing because the partner tuft might contact the teeth in a different manner and interfere with the rotation of the individual tuft. (Col. 1, lines 27-31.)

The specification then goes on to state that "[t]he present invention is directed to overcoming the problems set forth above" and explains that "according to one aspect of the present invention ... [e]ach tooth cleaning element is rotatable independent of the other tooth cleaning element(s)." (Col. 1, lines 49-58.) Thus, the language "rotatable independent of the other tooth cleaning element(s)" is clearly described as distinguishing JP '416 because "the other tooth cleaning element(s)" is understood to refer to *all* of the other tooth cleaning elements on the brush. The same logic must be applied to claim 1, which recites "each tuft of bristles being rotatable independent of the other tuft(s) of bristles." Indeed, the present Examiner had previously allowed claim 1 in its present form over JP '416 in both the issued parent and in earlier actions in this reissue application, presumably because he had interpreted claim 1 consistently with the specification. Accordingly, we ask the Examiner to withdraw the rejection.

Independent claim 1 is also rejected as allegedly anticipated by Germany 1 210 409 ("DE '409"). We traverse.

Claim 1 is directed to a "toothbrush." The preamble states as much and that is clearly what the specification describes. In contrast, the action all but concedes that what is disclosed in

DE '409 is not a toothbrush. The figures in DE '409 (which is in German) seem to disclose some type of conveyor belt with a plurality of brushing elements. Accordingly, claim 1 distinguishes DE '409 for at least the reason that it is directed to a toothbrush.

The action seems to suggest that the "toothbrush" recited in the preamble is merely a statement of intended use and therefore not entitled to patentable weight. We disagree. The preamble is directed to structure -- a toothbrush --, not an intended use. Perhaps it would be different if the preamble recited "an apparatus for brushing teeth," but that is not the case here. (See MPEP § 2111.02.)

Notwithstanding the preamble, claim 1 also distinguishes DE '409 because it recites "a *plurality* of tufts of bristles extending from the head" (emphasis added.) In contrast, element 2 in DE '409, which the action alleges as corresponding to the claimed head, only has a single tuft extending from it. The other two tufts extend from *different* elements 2' and 2, each of which extend separately from base 1, which the action alleges corresponds to the claimed handle. DE '409 fails to disclose a head extending from a handle and having a plurality of tufts of bristles extending there from the head, as required by claim 1. Accordingly, we ask the Examiner to withdraw the rejection.

We submit the claims that depend from claim 1 distinguish the cited prior art for at least the same reasons as those set forth above for independent claim 1.

Independent claim 12

Claim 12 is rejected as allegedly unpatentable over the disclosure of Figure 2 in Japan '416, further in view of DE 198 17 704 ("DE '704"). DE '704 is relied on for the disclosure of a tooth cleaning element that cannot be rotated. We traverse.

As presently amended, claim 12 requires that "each of the elements in the second group is supported for rotation about only one axis and independently rotatable with respect to one another *and any other tooth cleaning element on the toothbrush head*" (emphasis added.) Thus, claim 12 has been amended to make it absolutely explicit that the claimed independent rotatability of the tooth cleaning elements is with respect to all tooth cleaning elements on the

head. As discussed above with respect to claim 1, each tuft of bristles in Figure 2 of JP '416 is paired with a second tuft of bristles on a *common* cylindrical rotation element -- thus there is no *independent* rotation as required by claim 12. Accordingly, claim 12 distinguishes JP '416 and as a result the combination proposed in the action fails to meet all of the limitations of the claim.

Claim 12 further distinguishes the proposed combination because JP '416 does not disclose "the type of elements in the first group being different from the type of elements in the second group." The action alleges that this limitation is met simply by the tufts in JP '416 being located at different locations or positions on the toothbrush head. However, we respectfully submit that the broad interpretation proposed in the action cannot stand. Specifically, each of the claimed "tooth cleaning elements extending from the head" will necessarily correspond to different locations or positions on the toothbrush head. Accordingly, the action's broad construction effectively renders the claimed expression "the type of elements in the first group being different from the type of elements in the second group" meaningless, because it would not further limit the claim. Thus, the broad construction is improper and we ask the Examiner to withdraw the rejection, as JP '416 plainly shows tooth cleaning elements all of the same type -- i.e., every tooth cleaning element in JP '416 is a tuft of bristles.

We submit the claims that depend from claim 12 distinguish the cited prior art for at least the same reasons as those set forth above for independent claim 12.

Independent claim 25

Claim 25 is rejected as allegedly unpatentable over the disclosure of Figure 2 in Japan '416, further in view of DE 198 17 704 ("DE '704"). DE '704 is relied on for the disclosure of a tooth cleaning element that cannot be rotated. We traverse.

As presently amended, claim 25 requires "each tuft of bristles being rotatable independent of *all* other tuft(s) of bristles on the toothbrush head" (emphasis added.) Thus, like claim 12, claim 25 has been amended to make it absolutely explicit that the claimed independent rotatability of the tooth cleaning elements is with respect to all tooth cleaning elements on the head. As discussed above with respect to claim 1, each tuft of bristles in Figure 2 of JP '416 is

paired with a second tuft of bristles on a *common* cylindrical rotation element — thus there is no *independent* rotation as required by claim 25. Accordingly, claim 25 distinguishes JP '416 and as a result the combination proposed in the action fails to meet all of the limitations of the claim. Thus, we ask the Examiner to withdraw the rejection.

We submit the claims that depend from claim 25 distinguish the cited prior art for at least the same reasons as those set forth above for independent claim 25.

Independent claim 37

Independent claim 37 stands rejected as allegedly anticipated by JP '416. We traverse.

JP '416 does not disclose: “the first tooth cleaning elements being different from the second tooth cleaning elements” as required by claim 37. The action alleges that this limitation is met simply by the tufts in JP '416 being located at different locations or positions on the toothbrush head. However, we respectfully submit that the broad interpretation proposed in the action cannot stand. Specifically, each of the claimed “tooth cleaning elements extending from the head” will necessarily correspond to different locations or positions on the toothbrush head. Accordingly, the action's broad construction effectively renders the claimed expression “the type of elements in the first group being different from the type of elements in the second group” meaningless, because it would not further limit the claim. Thus, the broad construction is improper and we ask the Examiner to withdraw the rejection, as JP '416 plainly shows tooth cleaning elements all of the same type — i.e., every tooth cleaning element in JP '416 is a tuft of bristles.

We further note that new claim 125 depends from claim 37 and further recites “wherein the second tooth cleaning element is disposed to rotate independent of all other tooth cleaning elements on the head.” This claim distinguishes JP '416 in the same way as claims 1, 12, and 25 described above.

Independent claim 37 also stands rejected as allegedly anticipated by DE '704. We traverse. DE '704 does not disclose that “the socket defines a range of motion for the second tooth cleaning element along a first direction that is greater than that along a second direction

orthogonal to the first direction,” as required by claim 37 as presently amended. To the contrary, the English Abstract of DE ‘704 discloses “ball shaped elements (5)” for rotating the bristles, which indicates an equal range of motion over orthogonal directions. Accordingly, we ask the Examiner to withdraw the rejection.

Independent claim 37 also stands rejected as allegedly anticipated by US Patent No. 3,129,449 (“Cyzer”). We traverse. Cyzer does not disclose that “the socket defines a range of motion for the second tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction,” as required by claim 37 as presently amended. To the contrary, Cyzer describes brush elements that move freely in all directions. For example, Cyzer states:

The shuttling-oscillating, rotating combination of the brush elements *enables the carrying out of movements in all directions*, relative the brush-head including rotation about their individual axes as soon as the brush-head is moved into all directions or is simply pushed back and forth. (Col. 1, line 69 – col. 2, line 2, emphasis added.)

The cylinder-shaped openings of the upper half of the cup about the holders 5 and also the entire socket between the two halves of the cups are much wider than the inserted disks 7 and 7a, *so that they have free play in all directions*. (Col. 2, lines 40-45, emphasis added.)

Accordingly, we ask the Examiner to withdraw the rejection.

We submit the claims that depend from claim 37 distinguish the cited prior art for at least the same reasons as those set forth above for independent claim 37.

Independent claims 50 and 75

Independent claims 50 and 75 each stand rejected as allegedly anticipated by Cyzer. We traverse. Cyzer does not disclose that “the socket defines a range of motion for the tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction,” as recited in each of claims 50 and 75, as currently amended. To the contrary, as described above with respect to claim 37, Cyzer describes brush elements that

move freely in all directions – e.g., elements “that have free play in *all* directions” (Cyzer at col. 2, line 45, emphasis added.) Accordingly, we ask the Examiner to withdraw the rejection.

We submit the claims that depend from claims 50 and 75 distinguish the cited prior art for at least the same reasons as those set forth above for independent claims 50 and 75.

New independent claim 130

Independent claim 130 corresponds to previously pending claim 41 written in independent form. Prior claim 41 stands rejected as allegedly anticipated by Cyzer. Specifically, the action points to the disclosure in Cyzer of a rubber “staff” as meeting the claimed “the second tooth cleaning element comprises an elastomeric element in the form of a fin.” We traverse.

The disclosed “staff” is not a “fin.” A staff defines a substantially circular cross-section. This is the opposite of the claimed “fin,” which defines an elongate cross-section. See, for example, fins 16 in Figure 1 of the present application. There is no disclosure in Cyzer of an elastomeric element “in the form of a fin,” as required by claim 130. Accordingly, we ask that claim 130 be allowed.

Conclusion

We ask the Examiner to allow the application.

Canceled claims, if any, have been canceled without prejudice or disclaimer.

Any circumstance in which Applicants have: (a) addressed certain comments of the Examiner does not mean that Applicants concede other comments of the Examiner; (b) made arguments for the patentability of some claims does not mean that there are not other good reasons for the patentability of those claims and other claims; or (c) amended or canceled a claim does not mean that Applicants concede any of the Examiner's positions with respect to that claim or other claims.

To the extent the Examiner believes it would expedite prosecution, the undersigned would welcome the opportunity to discuss the application with the Examiner by telephone.

The fees for the additional claims in the amount of \$860.00 and the Petition for Extension of time in the amount of \$1050.00 are being paid concurrently on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any other charges or credits to deposit account 06-1050, referencing 00216-638001.

Respectfully submitted,

Date: January 7, 2008

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**APPENDIX SHOWING AMENDED CLAIMS RELATIVE TO PRIOR REPLY
FOR EXAMINER'S CONVENIENCE ONLY**

12. (Twice Amended) An apparatus comprising:
a toothbrush head; and
a first group of tooth cleaning elements extending from the head and a second group of a plurality of tooth cleaning elements extending from the head,
the elements within each of the groups being of a common type and the type of elements in the first group being different from ~~[[than]]~~ the type of elements in the second group, and
wherein each of the elements of the first group is nonrotatable, and each of the elements in the second group is supported for rotation about only one axis and independently rotatable with respect to one another and any other tooth cleaning element on the toothbrush head.

25. (Thrice Amended) An apparatus comprising:
a toothbrush head; and
a plurality of tufts of bristles extending from the head, each tuft of bristles being supported for rotation about only one axis, each tuft of bristles being rotatable independent of ~~[[the]]~~ all other tuft(s) of bristles on the toothbrush head.
further including at least one tooth cleaning element which cannot be rotated.

37. (Twice Amended) A toothbrush head, comprising:
a plurality of first tooth cleaning elements extending from the head and a second tooth cleaning element extending from the head;
the first tooth cleaning elements being different from the second tooth cleaning element;
and
wherein the second tooth cleaning element extends from a socket and wherein the second tooth cleaning element is rotatably disposed within the socket and wherein the socket defines a

range of motion for the second tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction.

43. (Once Amended) The toothbrush head of claim 37, wherein the range of motion of the second tooth cleaning element along the first direction is ~~has a range of rotation~~ less than about 60 degrees.

44. (Once Amended) The toothbrush head of claim 43, wherein the range of rotation along the first direction is limited by a portion of the head.

50. (Once Amended) A toothbrush head, comprising:

a top surface;

a socket;

a tooth cleaning element extending from the top surface of the head, wherein the tooth cleaning element comprises an elastomeric first portion for contacting the teeth and a second portion, wherein the second portion is rotatably disposed within the socket and wherein the first portion is formed separately from the second portion and wherein the first portion is attached to the second portion, and

wherein the socket defines a range of motion for the tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction.

54. (Once Amended) The toothbrush head of claim 50, wherein the range of motion of the second tooth cleaning element along the first direction is ~~has a range of rotation of~~ less than about 60 degrees.

63. (Once Amended) A toothbrush head, comprising:

a top surface having a first aperture, wherein the aperture extends from the top surface through to an intermediate surface of the head to define an opening on the intermediate surface;

~~a second aperture opposite the first aperture;~~
a socket;
a rotatable tooth cleaning element extending from the top surface of the head, wherein the tooth cleaning element comprises a first portion for contacting the teeth and a second portion, wherein the second portion is disposed within the socket; and
wherein the opening on the intermediate surface ~~second aperture~~ is covered by a piece that forms a bottom surface of the head that is opposite the top surface of the head; and
wherein the socket defines a range of motion for the tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction.

69. (Once Amended) The toothbrush head of claim 63, wherein the range of motion for the tooth cleaning element along the first direction ~~is has a range of rotation~~ less than about 60 degrees.

70. (Once Amended) The toothbrush head of claim 69, wherein the range of ~~rotation~~ motion is limited by a portion of the head.

71. (Once Amended) The toothbrush head of claim ~~[[64]]~~ 65, wherein the plurality of rotatable tooth cleaning elements and the plurality of second tooth cleaning elements are alternatingly arranged adjacent an edge of the toothbrush head.

75. (Once Amended) A toothbrush head, comprising:
a top surface comprising an aperture; and
a tooth cleaning element extending from the aperture, wherein the tooth cleaning element comprises an elastomer and wherein the tooth cleaning element is rotatably disposed within a socket of the head, and
wherein the socket defines a range of motion for the tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction.

79. (Once Amended) The toothbrush head of claim 75, wherein the range of motion of the tooth cleaning element along the first direction is has a range of rotation less than about 60 degrees.

80. (Once Amended) The toothbrush head of claim 79, wherein the range of rotation motion along the first direction is limited by a portion of the head.

96. (Once Amended) A toothbrush, comprising:
a handle;
a head attached to the handle, the head having a top surface with ~~a first an aperture and a second aperture opposite the first aperture,~~ wherein the aperture extends from the top surface through to an intermediate surface of the head to define an opening on the intermediate surface;
a socket;
an elastomeric tooth cleaning element extending from the top surface of the head, wherein the tooth cleaning element comprises a first portion for contacting the teeth and a second portion, wherein the second portion is disposed within the socket; and
wherein the opening on the intermediate surface ~~second aperture~~ is covered by a piece that forms a bottom surface of the head that is opposite the top surface of the head and wherein the piece is formed separately from the top surface, and
wherein the socket defines a range of motion for the tooth cleaning element along a first direction that is greater than that along a second direction orthogonal to the first direction.